

WHAT IS CLAIMED IS:

1. An autostereoscopic display comprising an image display, a signal display, and a parallax optic having a first portion, which cooperates with said image display to form a plurality of right and left eye viewing zones in a viewing region, and a second portion, which cooperates with said signal display to form a first signal image which is visible in at least one first part of said viewing region and a second signal image which is visible in at least one second part of said viewing region, said first portion comprising an array of parallax elements having a first pitch in a first direction, and said second portion comprising an array of parallax elements having a second pitch substantially equal to one and a half times said first pitch in said first direction.

2. A display as claimed in claim 1, in which said at least one first part comprises an orthoscopic viewing zone.

3. A display as claimed in claim 2, in which said at least one second part comprises pseudoscopic viewing zones adjacent said orthoscopic viewing zone.

4. A display as claimed in claim 1, in which one of said first and second signal images is a bright image and another of said first and second signal images is a dark image.

5. A display as claimed in claim 1, in which said first signal image is of a first colour and said second signal image is of a second colour different from said first colour.

6. A display as claimed in claim 1, in which said image display and said signal display comprise first and second portions, respectively, of a common display.

7. A display as claimed in claim 6, in which said common display comprises a light source and one of a light-transmissive and a trans-reflective spatial light modulator.

8. A display as claimed in claim 7, in which said spatial light modulator comprises a liquid crystal device.

9. A display as claimed in claim 1, in which said image display and said first portion cooperate to form said viewing zones in a plurality of lobes with two of said viewing zones per lobe.

10. A display as claimed in claim 1, in which said parallax optic comprises a lens array.

11. A display as claimed in claim 10, in which said lens array comprises a lenticular screen.

12. A display as claimed in claim 1, in which said parallax optic comprises an array of holographic optical elements.

13. A display as claimed in claim 1, in which said parallax optic comprises a parallax barrier.

14. A display as claimed in claim 13, in which said first portion of said parallax barrier comprises a plurality of slits of a first width and said second portion of said parallax barrier comprises a plurality of slits of the first width.

15. A display as claimed in claim 13, in which said first portion of said parallax barrier comprises a plurality of slits of a first width and said second portion of said parallax barrier comprise a plurality of slits of a second width less than said first width.

16. A display as claimed in claim 13, in which said parallax barrier comprises a plurality of parallax elements and alternate ones of said parallax elements of said second portion are aligned in a second direction substantially perpendicular to said first direction with respective ones of said parallax elements of said first portion.

17. A display as claimed in claim 1, in which said parallax optic is removable for a non-autostereoscopic display mode.

18. A display as claimed in claim 13, in which said parallax barrier comprises a first layer and a removable second layer, said first layer comprising barrier regions for supplying light having a first polarisation and aperture regions for supplying at least light having a second polarisation which is substantially orthogonal to said first polarisation, said second layer comprising a polariser for passing light of said second polarisation.

19. A display as claimed in claim 18, in which said image display and said signal display are arranged to supply light of said first polarisation, said barrier regions

are arranged to pass light of said first polarisation, and said aperture regions are arranged to convert light of said first polarisation at least partially to light of said second polarisation.

20. A display as claimed in claim 19, in which said first layer is a half waveplate, said barrier regions have optic axes parallel to said first polarisation and said aperture regions have optic axes aligned at 45° to said first polarisation.

21. A display as claimed in claim 1, in which said signal display is arranged to be active throughout a lateral extent corresponding to a lateral extent of each three dimensional image displayed by said image display.